Ser. No. 09/924,795

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Inventor: C. Posthuma

Case: 30

Serial No.: 09/924,795

Filing Date: August 8, 2001   Group Art Unit: 2637

Examiner: D. B. Lugo

Title: Maximizing DSL Throughput

COMMISIONER FOR PATENTS
P. O. BOX 1450
ALEXANDRIA, VA 22313-1450
SIR:

DECLARATION OF PRIOR INVENTION IN THE UNITED STATES TO OVERCOME CITED PATENT OR PUBLICATION (37 C. F. R. §1.131)

This declaration is to establish completion of the invention in this patent application in the United States, at a date prior to June 8, 2001, which is the effective date of the prior art publication that was cited by the Examiner.

A copy of "Patent Review - Request for Legal Opinion", submitted by me, and accompanied by a brief e-mail from me describing the invention, were forwarded on November 29, 2000 by Michael B. Johannesen, an attorney who was employed by Lucent Technologies Inc at the time, to Ms. Susan E. Curry, the Administrative Manager of Outside Counsel Program. The date is shown handwritten, I believe by Mr. Johannesen's secretary at the time, Ms. J. Spohn. Mr. Johannesen also sent me a letter confirming the receipt of the patent submission. Ms. Curry then sent a signed letter dated April 10, 2001 to Werner Ulrich authorizing him to file a patent application. A copy of these four documents is attached.) I then worked with Mr. Ulrich to prepare the application which was filed on August 8, 2001.

The Brief Description in the Patent Review - Request for Legal Opinion contains a good description of the invention.

A central controller could be used to monitor what data traffic is being sent on which lines. If there is no or just keep alive data traffic being sent on most of the lines most of the time then a customer that desires more bandwidth can get more bandwidth than the Worst Case limits that are imposed on static technologies. This central controller could sense the needed data rate to each line to keep them alive. This keep alive information would be minimal. Thus the lines that desire to send out max data rate could be increased. The overall crosstalk from this system while giving more data rate to the desired user would cause no more crosstalk than if all of the systems were running at their normal rate. When a system reduces its power being sent it should hold its configuration parameters such that it could go back to full power when needed.

Thus, these documents clearly state that it would be desirable to send data at a higher rate if some of the DSL lines in a cable or binder group are not transmitting at a high data rate.

In addition, I am attaching a copy of an Invention Record prepared by me on August 8, 2001, to which were attached the Patent Review - Request for Legal Opinion and the e-mail, the latter two document having a date of November 29, 2000 as noted above.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon

Carl Posthuma

9/28/05
Date

Attached:
Documents as stated

A central controller could be used to monitor what data traffic is being sent on which lines. If there is no or just keep alive data traffic being sent on most of the lines most of the time then a customer that desires more bandwidth can get more bandwidth than the Worst Case limits that are imposed on static technologies. This central controller could sense the needed data rate to each line to keep them alive. This keep alive information would be minimal. Thus the lines that desire to send out max data rate could be increased. The overall crosstalk from this system while giving more data rate to the desired user would cause no more crosstalk than if all of the systems were running at their normal rate. When a system reduces its power being sent it should hold its configuration parameters such that it could go back to full power when needed.

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Carl Posthuma

9/28/05
Date

Attached:
Documents as stated

Patent Review - Request for Legal Opinion

SUBJECT: Obtaining Maximum DSL Throughput

OBJECTIVE: (What problem does the proposal solve or what purpose does it serve?)

DSL is in a position to compete with Cable modems. While there are many advantages to DSL over cable modems there is one large disadvantage that is hard to overcome. The disadvantage is that cable modems can share peak data demand between many users while DSL modems are limited to the rate/reach/PSD limits as depicted by the standards so as not to cause too much crosstalk. However, if there is few or no other xDSL services in a cable or binder group desiring to communicate much information at the current time the rate/reach/PSD limits could be temporarily relaxed to allow maximum data throughput. The goal would be to have a system to dynamically mine the free bandwidth in the binder group and allocate to the desired user(s) while still maintaining acceptable crosstalk.

BRIEF DESCRIPTION: (1. What is it? 2. How does it operate? Rely on attachments for detailed description)

A central controller could be used to monitor what data traffic is being sent on which lines. If there is no or just keep alive data traffic being sent on most of the lines most of the time then a customer that desires more bandwidth can get more bandwidth than the Worst Case limits that are imposed on static technologies. This central controller could sense the needed data rate to each line to keep them alive. This keep alive information would be minimal. Thus the lines that desire to send out max data rate could be increased. The overall crosstalk from this system while giving more data rate to the desired user would cause no more crosstalk than if all of the systems were running at their normal rate. When a system reduces its power being sent it should hold its configuration parameters such that it could go back to full power when needed.

COMPARISON: (1. What is the know prior art, if any? 2. What are the differences over the prior art? 3. What commercial benefits are derived from these differences?)

1. Other people have suggested maximizing data throughput on an almost static basis to reduce crosstalk. Others have suggested dynamically shutting down to save power. 2. This system would dynamically adjust the power to reduce crosstalk and thus mine the added BW during short times of lulls and gain from the bursty nature of data for lines in a binder group that desire maximum peak bandwidth. 3. This would give more overall data throughput.

USE: (1. What is the probability of commercial use? 2. What is the expected annual sales volume or revenue, if used? 3. Who outside of Lucent may use it commercially?)

1. Some form of this could likely be used. 2. If this were proved to be successful it could be used on millions of lines of DSL. 3. Telecom and Data equipment and service providers could use this.

ORGINATORS OF THE PROPOSAL: (NAME, DEPT. # AND PHONE #)

     Carl Posthuma   JR1B0DA00   630-979-1636

BUSINESS UNIT(S) INVOLVED: _____ SSG, and others _____.

Attorney Consulted: (Name and date) _____ Ext. _____.

Submitted by: ___ Carl Posthuma _____ Ext. 9-1636 _____ Date: ___ 11/29/00

Approved By: _____ _ Ext. _____ Date:

Attachments: Yes   No   . Financial Project No. (WPN):

Subject: patent idea
Date: Wed, 29 Nov 2000 19:29:50 -0600
From: Carl Posthuma <" cposthuma"@lucent.com>
Reply-To: cposthuma@lucent.com
Organization: JR1B0DA00
To: "Johannesen, Michael" <johannesen@lucent.com>,
"Brouwer, Wim" <wlbrouwer@lucent.com>

Mike, Wim,

Here is an idea for a patent to try and make cable more competitive with
cable. I came up with this idea at a talk today when someone was talking
about doing crosstalk cancellation to get better data rates. However,
the talk did not consider cutting back those channels that were not
really sending any information because the user is either not using
there system at the time or there is a lull in the data flow. Due to
crosstalk reduction this would allow a DSL cable to allow some amount of
bursts in data. I made the mistake of suggesting this to the presenter
during a break and if there is any merit do not want him to be able to
get a patent on something I suggested. I will be out of the office until
Monday Dec. 11 but wanted to give you a heads up in case there is any
value.

Thanks,

Carl

	Name: Peak Rate DSL.doc
Peak Rate DSL.doc	Type: Winword File (application/msword)
	Encoding: base64

Subject: Patent Submission – IDS 123611	Date: November 30, 2000
Obtaining Maximum DSL Throughput	Michael B. Johannesen IL0015 2A-411 johannesen@lucent.com

C. R. Posthuma;

The above-identified patent submission was submitted to consider its patentability. You are listed as an originator. IP-Law is committed to being as responsive as possible regarding each submission. You will be contacted as soon as a decision is made on whether to file a patent application based on this submission.

The time required to prepare a patent application is affected by a variety of factors. As a result, it may take six months or more to file a patent application with the United States Patent and Trademark Office.

If the invention is sold, offered for sale, used as part of an internal process for commercial advantage, described in a printed publication, or is used or disclosed outside of Lucent Technologies, prior to filing an application in the United States Patent and Trademark Office, such activity may limit or negate the patentability of the invention in the United States or another country. **If you know or learn of such activities with respect to your invention, please call me immediately.**

In addition, each inventor has a duty to disclose to the United States Patent and Trademark Office all information known to the individual to be material to patentability. "Material" means all documents or information that you are aware of that shows how the problem has been solved in the past, how our competitors solve the same problem, etc.If you currently have such information, please give this information to me as soon as possible. If you acquire such information while your patent application is pending, please forward this information to the assigned attorney immediately. Do not perform a search at this time, but if you have already, please show me the results.

Information found in *"A Quick Guide to The Patent Process At Lucent Technologies"* may prove helpful. The URL is http://ip.web.lucent.com/creation.htm. Another helpful website is the informal web page of the Denver/Indian Hill Patent Creation group: http://ihgpweb.ih.lucent.com/patent.

If you have any administrative questions, please contact my secretary, Judy Spohn, at 630-979-2156 or jspohn@lucent.com. For substantive issues regarding the submission, please contact me directly.

For all further inquiries into the status of this submission, please use the above IDS number.

Michael B. Johannesen
Corporate Counsel
Intellectual Property - Law

Lucent Technologies
Bell Labs Innovations

Susan E. Curry
Administrative Manager
Outside Counsel Program
Intellectual Property Business

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Phone 732 949 7843
Fax 732 949 6410

April 10, 2001

VIA PRIORITY MAIL

Werner Ulrich, Esq.
434 Maple Street
Glen Ellyn, IL 60137

Re: IDS No.:   123611   **(CLASS II)**
     Managing Attorney   **Telephone No.**   **Fax No.**
     Michael B. Johannesen   (630) 979-2006   (630) 979-2246
     Secretary   **Telephone No.**
     Judy Spohn   (630) 979-2156

Dear Werner:

An advance copy of the above-referenced patent submission was sent to you by the Managing Attorney. Please follow the filing instructions specified by the Managing Attorney. If for any reason you cannot meet the filing date requested you MUST notify the Managing Attorney (MA) and me, VIA FACSIMILE, as soon as possible.

After the final claims have been drafted and you are therefore in a position to identify the inventors, please send "Request for Case Name/Number" (ATTACHMENT H) VIA FACSIMILE to Norma Davis at (732) 949-6410.

This invention has been initially reviewed and determined to have significant potential commercial value. Accordingly, a copy of the proposed application is to be sent to the MA prior to execution of the Declaration and Assignment; all other substantive papers such as amendments, appeal briefs, and the like are also to be sent to the MA prior to filing. The MA will notify you to proceed or contact you to discuss any requested changes, as appropriate. Furthermore, for continuity purposes, it is important that the *same* attorney that prepared the application be assigned to work on its continued prosecution. If otherwise, please advise.

If, during the prosecution of an application, you believe that a CPA/CIP, Divisional, Appeal, etc. should be filed, your advice should be presented to the Managing Attorney for concurrence, prior to commencement of any work.

Very truly yours,

Susan E. Curry

SEC:nmd
Encl. (As above)

Ad-II

INVENTION RECORD

*****One complete form printed per inventor

From: Carl Robert Posthuma

To: Michael Johannesen

Case Name: Posthuma 30

Title: Obtaining Maximum DSL Throughput

Identify document(s) which describe the invention.
Documents and Dates:

Initial application dated 11/29/01

Describe the early history of the invention, including dates and documents not identif
History, Documents and Dates:

none

Identify any person other than a co-inventor who was initially made aware of the inven
Names and Dates:

none

Identify any documents describing the invention that were read or witnessed by any suc
Documents, Names and Dates:

none

Attach copies, where possible, of each of the documents described above.

NA

Describe what was implemented or demonstrated in connection with the invention.

no demonstration

Identify persons who worked on the implementation/demonstration.
Names and Dates:

no demonstration

Identify persons who tested the implementation or carried out the demonstration. Names and Dates:

none

Identify persons who witnessed or observed the implementation and/or tests.

none

Identify any documents describing the implementation and/or tests.

none

Inventor(s) signature(s) and Date(s)

Carl Robert Posthuma 8/8/01

Attach copies, where possible, of each of the documents described above.